



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/739,994

12/18/2000

Mikael Bisgaard-Bohr

9684

4293

26890

7590

06/14/2006

JAMES M. STOVER
NCR CORPORATION
1700 SOUTH PATTERSON BLVD, WHQ4
DAYTON, OH 45479

EXAMINER

NGUYEN, CINDY

ART UNIT

PAPER NUMBER

2161

DATE MAILED: 06/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/739,994

Applicant(s)

BISGAARD-BOHR ET AL.

Examiner

Cindy Nguyen

Art Unit

2171

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-9,11-17 and 19-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-9,11-17 and 19-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments (filed 02/21/06)

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

1. Double Patenting

Claims 1, 3, 6-9, 11, 14-17, 19 and 22-27 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-12 of U.S. Patent No. 6947878 in view of Vijaykumar (US 5499359).

Patent no. 6947878 discloses every limitations of application claim invention see claims 1-12 excepted for wherein the data model is accessed from a relational database managed by a relational database management system. On the other hand, Vijaykumar discloses: wherein the data model is accessed from a relational database managed by a relational database management system see col. 3, lines 15-62 and see the abstract. The motivation to do to maintain in one or more database tables for easy efficient storage and retrieval.

2. Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3, 7, 9, 11, 15, 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vijaykumar (US 5499359) in view of Kraemer (US 6490602).

Regarding claims 1, 9 and 17, Fayyad disclose: a method, an apparatus for a data structure, for analyzing retail transactional data in a computer-implemented data mining system (12, fig. 2 and corresponding text, Fayyad), wherein the data structure is a data model that defines the manner in which said retail transaction data is stored and organized within said data mining system said data model (130 fig. 1B and corresponding text, Vijaykumar).

a basket database table that contains summary information about the transactional data (order database table, fig. 5 and corresponding text, Vijaykumar);

an item database table that contains information about individual items referenced in the transactional data (line item database, fig. 4 and 5 and corresponding text, Vijaykumar), and a department database table that contains aggregate information about the transactional data (stock database table, fig. 4 and 5 and corresponding text, Vijaykumar)

However, Vijaykumar didn't disclose: the data model is mapped to aggregate the transactional data for cluster analysis of shopping behavior. On the other hand, Kraemer discloses: the data model is mapped to aggregate the transactional data for cluster analysis of shopping behavior (col. 7, lines 45-67, Kraemer). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to

include data model is mapped to aggregate the transactional data for cluster analysis of shopping behavior in the combination system of Vijaykumar as taught by Kraemer. The motivation being to enable the system recording valuable marketing information in predicting future or related consumer behaviors and for targeted advertising.

In addition, Vijaykumar/Kraemer discloses wherein the data model is accessed from a relational database managed by a relational database management system (fig. 3C-3K and fig. 4A-4E and corresponding text, Vijaykumar).

Regarding claims 3, 11 and 19, most of the limitations of these claims have been noted in the rejection of claims 1, 9 and 17 above, respectively. In addition Vijaykumar/Kraemer disclose: Wherein the cluster analysis groups the transactional data into coherent groups according to perceived similarities in the transactional data (col. 7, lines 1-10, Kramer).

Regarding claims 7, 15 and 23, all the limitations of these claims have been noted in the rejection of claims 1, 9 and 17, respectively. In addition, Vijaykumar/Kraemer disclose: wherein the data model is mapped into a database view to produce a correct level of aggregation for statistical analysis (fig. 7A and 7B and corresponding text, Vijaykumar).

4. Claims 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vijaykumar (US 5499359) in view of Kraemer (US 6490602) and further in view of Fayyad et al. (US 6263337).

Regarding claims 25-27, all the limitations of these claims have been noted in the rejection of claims 1, 9 and 17, respectively. In addition, Vijaykumar/Kraemer didn't disclose: wherein the cluster analysis utilizes a Gaussian Mixture Model. On the other hand, Fayyad discloses: wherein the cluster analysis utilizes a Gaussian Mixture Model (120, fig. 4 and corresponding text and col. 9, lines 22-67, Fayyad). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include the cluster analysis utilizes a Gaussian Mixture Model in the combination system of Vijaykumar/Kraemer as taught by Fayyad. The motivation being to enable the system to process using Gaussian mixture model for better clustering by applied to a mixture of Gaussians justified criteria for deciding which data can be summarized .

5. Claims 6, 8, 14, 16 , 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vijaykumar (US 5499359) in view of Kraemer (US 6490602)and further in view of Lazarus et al. (U.S 6430539) (Lazarus).

Regarding claims 8, 16 and 24, all the limitations of these claims have been noted in the rejection of claims 1, 9 and 17 above, respectively. In addition, Vijaykumar/Kraemer/Lazarus discloses: wherein the data model is comprised of one row per transaction in the transactional data (table 3 and col. 14, lines 15-51, Lazarus). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include transaction step of one row per transaction in the transaction data in the combination system of Vijaykumar/Kraemer as taught by

Lazarus. The motivation being to enable the user to process one transaction data at the time to avoid corruption of data by the system.

Regarding claims 6, 14 and 22, all the limitations of these claims have been noted in the rejection of claims 1, 9 and 17, respectively. In addition, Vijaykumar/Kraemer /Lazarus discloses: wherein the data model is mapped into a single flat table format to produce a correct level of aggregation for statistical analysis (table 3 and col. 14, lines 15-51, Lazarus). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include data model is mapped into a single flat table in the combination system of Vijaykumar/Kraemer as taught by Lazarus. The motivation being to enable the user to implement data model into a single format and classifying data in the table.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

1. Contact information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cindy Nguyen whose telephone number is 571-272-4025. The examiner can normally be reached on 8:30-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gaffin Jerry can be reached on 571-272-4160. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CN

Cindy Nguyen
July 21, 2004

Frantz Coby
FRANTZ COBY
PRIMARY EXAMINER